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FOREWORD

The *QUARTERLY REVIEW OF MEDICINE* is devoted to the presentation of selected abstracts encompassing the various subdivisions and related fields of internal medicine. Not only the content but the status of the material in its relationship to present-day knowledge and concept influences the basis of selection. Special review articles and advanced experimental and clinical reports on the subjects of current interest are also included. It is hoped that noteworthy trends in the field of internal medicine will thus be recorded and a proper perspective on the rapidly changing and dynamic state of medical knowledge attained.

The abstracts and editorial comments are grouped together under the following headings:

INFECTIOUS DISEASES	HEMATOPOIETIC DISEASES
ONCOLOGY	ALLERGY
RESPIRATORY DISEASES	METABOLIC AND ENDOCRINE DISORDERS
CARDIOVASCULAR DISEASES	GERIATRICS
GASTROINTESTINAL DISEASES	DERMATOLOGY AND SYPHILIGOLOGY
GENITOURINARY DISEASES	DISEASES OF DOUBTFUL ORIGIN
MUSCULOSKELETAL DISEASES	BASIC SCIENCES
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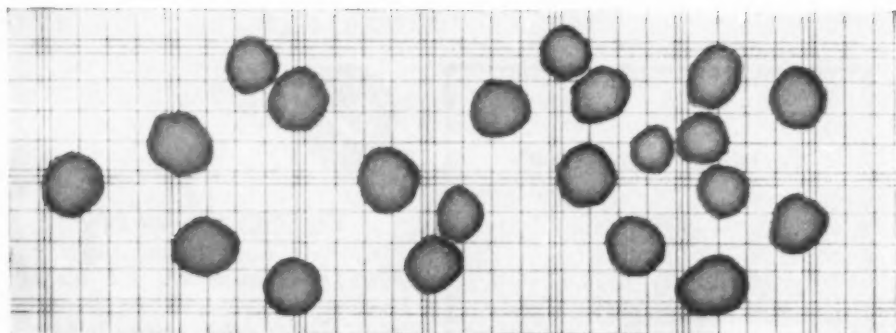
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Incorporating the International Record of Medicine

Emanuel B. Schoenbach

1911-1952

On Saturday, September 6th, Emanuel B. Schoenbach, Editor-in-Chief of the *Quarterly Review of Medicine*, died of a heart attack at his home in Brooklyn.



Emanuel B. Schoenbach

For the Washington Institute of Medicine this was a particularly unexpected loss, since Dr. Schoenbach had only directed the Editorial Board of that magazine since the beginning of 1952, and in every other phase of his activity, at the age of 40, was just starting on an extremely promising career. His capability as an Editor was fully demonstrated by his own highly informative scientific contributions, his appointment of an active and able Editorial Board, and his skillful editing and rewriting of all material for that journal.

A research expert in bacteriology and chemotherapy of infectious diseases, Dr. Schoenbach was engaged in research on the chemotherapy of cancer at the time of his death. He had been Professor of Medicine at the State University Medical Center at New York and Director of Medical

Services at the Maimonides Hospital of Brooklyn since September 1951. Two years ago, while he was Associate Professor of Preventive Medicine and Assistant Professor of Medicine at Johns Hopkins Medical School, he took part in studies which developed a compound that helped to starve cancer cells. Two months before his death, the American Cancer Society announced that he had found an apparent remedy for the usually fatal fungus infection, blastomycosis.

ABSTRACTS

INFECTIOUS DISEASES

176. *Priscoline in Acute Poliomyelitis. Clinical Observation of Seventy-one Patients.* A. C. LA BOCCETTA AND K. E. DAWSON, Philadelphia, Pa. *J. A. M. A.* 148: 1083-85, Mar. 29, 1952.

There is clinical evidence to show that, in some patients with acute poliomyelitis, pain and spasm are the result of ischemia from angiospasm which can be relieved by increasing the blood supply to the muscles with external heat or vasodilator drugs. Priscoline (R) (2-benzyl-4, 5-imidazoline hydrochloride), a sympatholytic drug, has been found effective by Smith and associates to relieve pain in patients with poliomyelitis. Seventy-one patients with acute anterior poliomyelitis were treated with Priscoline (R) in the Philadelphia Hospital for Contagious Diseases in 1950. These included 4 nonparalytic, 1 bulbospinal encephalitic, 1 spinal encephalitic and 65 with spinal involvement. Of these patients, 45 had spontaneous muscle pain, 24 had pain on motion or with muscle stretching, and 2 had spasm without pain. Twenty-three of the patients were from birth to four years of age, 26 were from five to nine years. Priscoline (R) was given intramuscularly initially to determine the effectiveness of the drug. The intramuscular dose of Priscoline (R) for patients from 1 to 15 years of age was from 25 to 50 mg., and over 15 years from 50 to 75 mg.; the oral dose was 50 per cent larger. The dose of Priscoline (R) was increased until there was relief of symptoms or until untoward reactions appeared. Twenty-seven per cent of the patients obtained complete relief of pain and spasm, 37 per cent obtained partial relief, and 37 per cent obtained no relief. Seventeen patients had nausea or emesis, diaphoresis occurred in 7, chills in 6, diarrhea in 1, and palpitation in 1; urticaria occurred in 1 patient in this group. It is recommended that patients with acute anterior poliomyelitis, who have muscle pain and spasm, be given a trial with Priscoline (R).—*Author's abstract.*

177. *Nocardiosis: Three Case Reports.* I. L. BERNSTEIN, Fort Wayne, Ind., J. E. COOK, Iowa City, Iowa, H. PLOTNICK, Dayton, Ohio, AND F. J. TENCZAR, Chicago, Ill. *Ann. Med.* 38:352-63, March 1952.

In a review of the literature 43 cases of nocardiosis were found; the authors report 3 new cases, 2 of which were fatal. In the first case in addition to symptoms resembling those of pulmonary tuberculosis, there were multiple subcutaneous abscesses and disorientation. *N. asteroides* was isolated from the pus of the subcutaneous abscess during life, but intensive treatment with antibiotics was unavailing; at autopsy abscesses were found in the cerebral hemispheres. It is noted that this patient had had pulmonary silicosis, a condition not noted in any of the reported cases. In the second case both pulmonary and neurologic symptoms were

noted, the latter suggesting the presence of a brain abscess, which was confirmed at autopsy. Nocardias were not isolated in this case during life, but *N. asteroides* was isolated from the brain abscess as well as from the pleural fluid at autopsy. In the third case, the symptoms resembled those of pulmonary tuberculosis with pleurisy; in this case the Nocardia organisms were isolated by culture from the pleural fluid, but the authors call attention to the fact that the cultures contained acid-fast mycelia that were similar to *Mycobacterium tuberculosis*. In this case combined streptomycin-penicillin therapy resulted in recovery, and the patient has shown no recurrence in four years. In most of the cases of nocardiosis reported sulfadiazine has proved more effective in treatment than the antibiotics. Penicillin has been found to inhibit Nocardia organisms if given in sufficiently large dosage to produce high blood concentrations. In *in vitro* tests streptomycin in high concentration also has been found to inhibit the organisms, but no case, other than the authors' third case, has been reported in which streptomycin-penicillin therapy effected a cure. They advise that sulfadiazine should be included in combined therapy for nocardiosis and that other drugs should be evaluated for therapy by *in vitro* sensitivity tests. 21 references. 3 figures.

178. *Clinical Experience with Streptokinase and Streptodornase in Tuberculosis.*
JOSEPH M. MILLER, PERRIN H. LONG, AND EDWARD S. STAFFORD, Baltimore,
Md. J. A. M. A. 148:1485-89, April 1952.

Streptokinase and Streptodornase are surface-acting compounds, producing a selective chemical debridement of infected wounds. Streptokinase causes the liquefaction of fibrin, and Streptodornase causes the hydrolysis of deoxyribose nucleoprotein. The healing of infected wounds is enhanced by the removal of fibrin and deoxyribose nucleoprotein.

The best results are obtained where provision for drainage is adequate. The circulation to the involved area must be good. Necrotic tissue must be removed manually, since it prevents satisfactory contact of the enzymes with the wound.

Toxic effects from application to external wounds have not been seen as yet. Minor headaches, aching, and an elevation in temperature have been seen more frequently in the instances in which closed spaces have been treated. Prothrombin times have not shown significant alteration from the normal. Hematomas and areas of ecchymosis have not been seen. Bleeding has not been produced by the topical application of these compounds.

The contents of an ampule of Streptokinase, 100,000 units, and Streptodornase, 60,000 units, are readily soluble in 20 cc. of sterile isotonic sodium chloride solution. Vigorous shaking should be avoided. When prepared, the solution should be used immediately. Where divided doses of an ampule are administered, the remainder is placed in a sterile container and stored in a refrigerator.

When used as an ointment, 100,000 units of Streptokinase and 60,000 units of Streptodornase are incorporated in 10 cc. of Lubafax, a water-soluble base. The addition of antibiotics, such as aureomycin, to this suspension may prove useful to control surface infection.

To date, 19 patients with tuberculous infections, of which 14 were severe, have been treated by the methods described. These include 4 patients with tuberculous empyema, 5 patients with tuberculous lymphadenitis, and 10 patients with some manifestation of tuberculosis of the bones, joints or tendons. In 16 of these, the tuberculous infection has been controlled, and all wounds and sinuses are healed. The remaining 3 individuals had far advanced and progressive tuberculosis. Local improvement was obtained in each of these but the systemic progress of the disease continued with fatal result.

Care must be taken when Streptokinase and Streptodornase are used in the treatment of tuberculous empyema in the presence of a bronchopleural fistula, since spread of the infection may occur. This complication has not been seen in two instances so treated.

The rapidity of healing afforded by surgical drainage of tuberculous abscesses when combined with the use of Streptokinase and Streptodornase offers a more satisfactory way of treating these lesions than older conservative methods. The enzymes must be used purely as an adjunct, however, to other therapy. The compounds do not affect living tissue and facilitate the formation of healthy granulation tissue. If spontaneous closure of wounds does not occur rapidly, secondary closure may then be carried out. 14 references.—*Author's abstract.*

179. *The Treatment of Some Bacterial Infections of the Heart and Pericardium.*
THOMAS H. HUNTER, St. Louis, Mo. Bull. New York Acad. Med. 28:213-28,
April 1952.

The author reports on experimental observations of the effects of various antibiotics singly and in combination on large populations of nonhemolytic *streptococci in vitro*. Studies also are described of the effects of antibiotics on populations of the same organisms incorporated in human blood clots. Quantitative bacteriologic studies extending over periods up to 24 days are included. It is demonstrated that all penicillin-sensitive strains of *Streptococcus viridans* are not completely killed by concentrations of penicillin as much as 100 times the minimal inhibiting concentration maintained for as long as one week. It is further shown that high concentrations of penicillin of the order of 10 u/ml. may be required to eradicate some green *streptococci* from blood clots. Although streptomycin by itself is largely inactive against many strains of nonhemolytic *streptococci*, combined with penicillin it enhances the bactericidal activity of the latter very strikingly and the combination of penicillin with streptomycin appears to be the most active one discovered against both the *enterococci* and *Streptococcus viridans* strains studied. Aureomycin and terramycin are usually found to be largely bacteriostatic in their action, although, when combined with streptomycin, their effect is often bactericidal in liquid media. The combination of aureomycin or terramycin with streptomycin was not found to be effective in eliminating viable bacteria from blood clots. Clinical correlations with these observations are discussed. 13 references. 14 figures.—*Author's abstract.*

ONCOLOGY

130. *Further Observations on the Use of Triethylene Melamine in Neoplastic Diseases.*

JUNE C. WRIGHT, AARON PRIGOT, LOUIS T. WRIGHT, AND ISIDORE ARONS,
New York, N. Y. Arch. Int. Med. 89:387-404, March 1952.

In a previous paper, the use of triethylene melamine in the treatment of 14 cases of neoplastic diseases of various types was reported. In this paper 28 additional cases are reported, with follow-up reports on 6 of the cases reported previously. Improvement was obtained in 18 of the series of 42 patients, including 9 in the group previously reported and 9 in the new group. Definite improvement was noted in 4 of 6 cases of Hodgkin's disease, 3 cases of lymphosarcoma, 2 of 3 cases of reticulum-cell sarcoma, 3 cases of chronic lymphatic leukemia, 4 cases of fibrosarcoma, and 1 case, each, of chronic myelogenous leukemia and mycosis fungoides. Two cases of Hodgkin's disease showed no favorable response; while cases of lymphosarcoma and reticulum-cell sarcoma showed a favorable response, there were no beneficial results in other types of sarcoma or in 12 cases of carcinoma. Twenty-nine of the 42 patients have died, including 8 in the group reported previously and 21 in the new group. In 2 cases, 1 of Hodgkin's disease and 1 of lymphosarcoma, in which a definite leukopenia developed following triethylene melamine therapy, the citrovorum factor was given to restore the white cell count to normal. 3 references. 10 figures. 4 tables.

131. *Mesenchymal Tumors of the Stomach.* GLADDEN V. ELLIOTT AND HUGH M.

WILSON, St. Louis, Mo. Arch. Int. Med. 89:358-67, March 1952.

In a total of 5,183 examinations of the stomach in the last 18 months, gastric lymphosarcomas were found to account for 14.3 per cent of all the gastric neoplasms found, an unusually high percentage as compared with the incidence of gastric sarcomas reported by others. In the same period 5 leiomyomas of the stomach were found—an additional 4.2 per cent of all gastric neoplasms; there was 1 other case of subserosal lipoma. In 1 of these 6 cases, there was massive hematemesis, in another repeated gastro-intestinal hemorrhages had occurred, and 2 had melena. In 2 cases the patients were admitted with a diagnosis of anemia and evidence of gastro-intestinal bleeding as the cause of the anemia was found on examination. There was a palpable abdominal mass in only 1 case; in 2 other cases the roentgenologic examination showed large masses. The most characteristic roentgenologic findings in these cases were: a sharply circumscribed intraluminal filling defect, sometimes associated with a mass projecting beyond the outline of the stomach; the obliteration of gastric rugae over the tumor with normal rugae in the surrounding region; pliable gastric walls and active peristalsis, and an evidence of ulceration in the center of the tumor in some cases. While a definite diagnosis of leiomyoma or lipoma cannot be made by clinical and roentgenologic examination, the symptoms and roentgenologic findings in leiomyosarcoma are more varied and confusing. In cases of primary lymphosarcoma of the stomach the clinical symptoms resembled those of gastric carcinoma. There were in addition, 7 cases of

lymphosarcoma of the stomach associated with generalized lymphosarcoma, in 3 of which the primary lesion may have been in the stomach. The only method of making an exact diagnosis is by means of histologic study. In the 6 cases of leiomyoma and lipoma, the tumor was diagnosed as histologically benign, but in 1 of these cases (leiomyoma with ulceration), the postoperative clinical course (with loss of weight and hepatomegaly) indicates malignancy (possibly leiomyosarcoma). 9 references. 7 figures. 3 tables.

CARDIOVASCULAR DISEASES

132. *Orthostatic Hypotension Following Chordotomy for Intractable Pain.* DONALD A. JOHNSON, GRACE M. ROTH, AND WINCHELL MCK. CRAIG, Rochester, Minn. *Proc. Staff Meet., Mayo Clin.* 27:131-35, Mar. 26, 1952.

Orthostatic hypotension is fundamentally a disorder of the nervous system. The variety of neurologic lesions which may be associated with orthostatic hypotension indicates that interruption of a vasopressor pathway at various levels within the nervous system may account for the syndrome. Because anhidrosis is often associated with it, idiopathic orthostatic hypotension usually has been attributed to a hypothalamic lesion. A case is reported in which severe orthostatic hypotension followed a bilateral high thoracic anterolateral chordotomy for intractable pain. Anhidrosis was postoperatively below the level of the chordotomy. A gradual recovery of vascular and sweating functions occurred.

The similarity of this complication of chordotomy to idiopathic orthostatic hypotension suggests that some cases of the latter are due to lesions in the anterolateral quadrant of the spinal cord. 24 references. 1 figure.—*Author's abstract.*

133. *Factors in the Onset of Coronary Occlusion and Coronary Insufficiency. Effort, Occupation, Trauma, and Emotion.* ARTHUR M. MASTER AND HARRY L. JAFFE, New York, N. Y. *J. A. M. A.* 148:794-98, Mar. 3, 1952.

Because of the frequency of coronary disease and the increasing number of people in industry over the age of 45, the relation of acute coronary episodes to effort, trauma, occupation, and emotion is of great scientific and medico-legal importance. In the past, there has been some disagreement concerning the relationship of effort, emotion, and trauma to coronary occlusion. We think that much of this difference is the result of not differentiating acute coronary occlusion from coronary insufficiency. The two can be separated electrocardiographically in over 90 per cent of cases.

In over 2,080 attacks of coronary occlusion only 2 per cent were found to be associated with unusual effort and reasons are given for considering the relationship coincidental. Occupation, season, and time of day did not influence the incidence of coronary occlusion. In 100 attacks of coronary insufficiency 56 began spontaneously and 44 were precipitated by hemorrhage, pulmonary embolism, effort, tachycardia, operation, excitement and meals. Angina pectoris almost always is

related to effort; coronary insufficiency is related to effort in about half the cases and coronary occlusion only rarely and coincidentally. Trauma may produce confusion of the heart or coronary insufficiency. The criteria for establishing compensability in acute coronary episodes are discussed. The following theoretical problems are considered: relationship of one attack of coronary occlusion to a subsequent one; length of disability and employability following coronary occlusion; causal relationship of effort to permanent angina pectoris. In general, the outlook for the worker after coronary occlusion is much better than was formerly thought. One half to two thirds of patients return to gainful employment within one year. In coronary insufficiency the prognosis is even better. 2 figures. 6 tables.—*Author's abstract.*

134. *Tuberculous Pericarditis. Its Treatment with Streptomycin and Some Observations on the Natural History of the Disease.* THEODORE M. MYERS AND MORTON HAMBURGER, Cincinnati, Ohio. *Am. J. Med.* 12:302-10, March 1952.

Three patients with clinically primary tuberculous pericarditis with effusion, who had no clinical evidence of tuberculosis elsewhere in the body, were treated with intramuscular streptomycin for 90, 90, and 112 days, respectively. Their response was dramatic and prompted the report. When compared with 9 patients who had the same disease during the pre-streptomycin era and who received no specific treatment, it was evident that those who received streptomycin did considerably better. Although 4 of the 9 untreated patients showed spontaneous healing of the pericarditis, they were febrile for a longer period than the treated patients, and within 24 months all 4 had evidence of recurrence elsewhere in the body. The 3 patients who received streptomycin, on the other hand, are perfectly well and at the time the manuscript was submitted had been followed from 24-31 months. From observing the natural history of clinically primary tuberculous pericarditis with effusion, it became apparent that this entity and miliary tuberculosis with pericardial involvement are often indistinguishable when the patient is first seen. It also became apparent that tuberculous pericarditis may heal spontaneously and that death is usually due to dissemination rather than pericardial involvement *per se*. It also seemed that streptomycin shortened the course of the disease and improved the long-term prognosis. 13 references. 4 tables.—*Author's abstract.*

135. *Angina Pectoris in the Absence of Coronary Disease.* JAMES LEE WILSON AND SAMUEL A. LEVINE, Boston, Mass. *Ann. Int. Med.* 38:897-991, March 1952.

Typical attacks of angina pectoris had occurred in 2 patients, in whom autopsy showed that the coronary arteries were normal. One of these patients was a woman 30 years of age with severe anemia, and the other patient was a man 61 years of age with diffuse amyloid disease which involved the myocardium. In a review of the literature it was found that other rare cases of anemia with attacks of angina and without coronary artery disease have been reported. Also a small "but not insignificant" number of cases have been reported in which anginal attacks occurred in

cases of heart disease without involvement of the coronary arteries—valvular disease (aortic or mitral) and hypertensive heart disease, but no other case of angina in amyloid disease of the heart was found. 10 references. 2 figures.

RESPIRATORY DISEASES

136. *Diffuse Interstitial Fibrosis of the Lungs*. ELI H. RUBIN, BERNARD S. KAHN, AND DAVID PECKER, New York, N. Y. *Ann. Int. Med.* 38:327-44, March 1952.

In the case reported the patient was a 44 year old woman; when first seen at the hospital she had a cough with thick mucous sputum and dyspnea on exertion; the only physical sign elicited was the presence of rales in the left lower lobe; the x-ray examination showed exaggeration of the pulmonary markings in both lungs. Dyspnea and cough became more severe; she was twice readmitted to the hospital, and treated in an oxygen tent; she died suddenly with symptoms of acute respiratory failure 4 days after being discharged from the hospital, 2 years and 4 months after her admission. The diagnosis of interstitial pulmonary fibrosis, as described by Hamman and Rich in 1944, was based on the manner of death, rather than on the course of the disease. It was confirmed at autopsy. A review of the literature showed 13 other cases of diffuse interstitial fibrosis of the lungs, including the 4 reported by Hamman and Rich, which are briefly summarized. The chief symptoms in all cases were cough, with varying amounts of sputum, chest pain, occasional hemoptysis, fever, and increasing dyspnea and cyanosis; clubbing of the fingers and toes occurred in some cases, including the authors' case. In most cases the onset of the disease was sudden, but in some cases gradual and insidious; the duration of life after the onset of symptoms varied from 34 days to 3½ years. Autopsy in these cases showed diffuse interstitial fibrosis involving both lungs and thickening of the alveolar septa, which were partially replaced with hyalinized connective tissue; different stages of the fibrosis were found in various areas of the lungs. In most cases there was cardiac enlargement, chiefly of the right heart. The authors are of the opinion that this disease is caused by a virus, the fibrosis in the lung representing one form of tissue reaction to this virus, which may be associated with involvement of other tissues. It is possible that recovery may occur in some cases, but this cannot be proved as exact diagnosis must depend on the autopsy findings. 14 references. 7 figures.

BOOK REVIEWS

Antibiotic Therapy. HENRY WELCH, PH.D. AND CHARLES N. LEWIS, M.D. (With a Foreword by Chester S. Keefer, M.D.) The Arundel Press, Inc., Washington, D. C., 1951.

The recent advances in the chemotherapy of infectious diseases and the introduction of the newer antibiotic agents have revolutionized therapy. However, although more may be done for the patient, the physician has been presented

with a complex problem in the selection and use of each of the antibiotic agents, its indications, and contraindications.

Dr. Welch and Dr. Lewis have performed a distinct service in assembling the data on the various antibiotics. A short history of each, with a description of its isolation and pharmacology, is presented. A very happy addition is the biographical sketch of the individuals who have contributed to the isolation of these newer antibiotics.

In addition to the *in vitro* antimicrobial spectrum, there are chapters on the common bacterial, spirochetal, viral, and rickettsial diseases. These are well organized in that a short review of the clinical course is appended before the detailed specific antibiotic therapy is discussed. Not only are the recommended antibiotics and their dosage outlined, but intimate details as to dosage-schedule and the various forms in which the antibiotics are available for clinical use are included.

The completeness of this book is impressive and it is vastly superior to many of the so-called comprehensive compilations that have been previously offered to physicians. An extensive bibliography is appended to each chapter and the index will be found most helpful.—*Emanuel B. Schoenbach, M.D.*

Tumors of the Carotid Body and Related Structures (Chemoreceptor System). PHILIP M. LE COMPTE, M.D., Boston, Mass. Atlas of Tumor Pathology, Section IV, Fascicle 16, Published by the Armed Forces Institute of Pathology, Washington, D. C., 1951. 40 pages, 23 figures. Price: 45 cents.

This is another in the series of monographs on tumor pathology published by the Armed Forces Institute of Pathology and the National Research Council. The increasing recognition of tumors of the carotid body, and structurally similar tumors arising elsewhere, has aroused great interest. Much confusion surrounds the classification of these tumors. The present monograph is well organized and illustrates clearly the various aspects of the problem. It is wholeheartedly recommended.—*Emanuel B. Schoenbach, M.D.*

Blood Clotting and Allied Problems. Transactions of the Fourth Conference, January 22-23, 1951. Edited by JOSEPH E. FLYNN, Department of Pathology, College of Physicians and Surgeons, Columbia University, New York. Josiah Macy Jr. Foundation, New York, 1951. 272 pages, 27 tables, 81 figures. Price: \$4.00.

This conference on the problems of blood clotting has, as usual, a distinguished group of participants under the chairmanship of Dr. Irving S. Wright. In the words of the medical director the answer to many problems attracting the interest of investigators in the medical sciences will not be served by "further fragmentation into increasingly isolated specialties, disciplines and departments but by integration of . . . scientific knowledge of all branches."

The conference deals with the problems of blood clotting in its various aspects including the physiology of the circulation so ably presented by Dr. Knisely, the complex components of clot-formation and the chemistry of the protein moieties which participate in the process. The thesis in each section is ably presented and the discussion which is interspersed or appended is critical and illuminating. Perspective as to the status of our knowledge and the basic premises of current theories is attained.

This presentation is in keeping with the other conferences published by the Josiah Macy Jr. Foundation and is recommended to students, physicians and those in allied fields as a dynamic and informative presentation.—*Emanuel B. Schoenbach, M.D.*

Adrenal Cortex—Transactions of the Second Conference, November 16-17, 1950. Edited by ELAINE P. RALLI. Josiah Macy Jr., Foundation, Progress Associates, Inc., Caldwell, N. J. Price: \$3.00.

This is another valuable and timely discussion on the problems of adrenosteroids and adrenocortical function. The general topics covered are: the present status of ACTH; regulation of pituitary adrenocorticotrophic activity; the relation of the adrenal cortical hormones to the hypersensitive state; hyaluronidase and the adrenal cortical hormones; further clinical studies with ACTH and adrenal cortical hormones.

This type of presentation is most stimulating in that it is not a formal, but a free and active discussion. These conferences are not designed for the general practitioner, but they are highly recommended for students and individuals interested in this particular field. Much more is offered in this symposium than is indicated by the factual data. The attitude and criticisms provide very valuable additional knowledge. The clinical studies indicate the direction in which future developments of our knowledge of adrenocortical function may be applied.

This conference, as the others in this series, makes one feel that one is participating in the discussion.—*Emanuel B. Schoenbach, M.D.*